

Amendments to the Specification:

Please replace paragraph 45 of the Specification with the following rewritten paragraph:

[0045] In particular, when the stimuli-responsive hydrogel according to an embodiment is applied to an actuator capable of carrying out expansion/contraction operation as in living skeletal muscles, the content of the water-insoluble polymer is as follows. When the monomer component constituting the stimuli-responsive polymer comprises only a monomer having a stimuli-responsive functional group, the content of the water-insoluble polymer is such that the volume ratio of ~~the water-insoluble polymer to the~~ stimuli-responsive polymer or the monomer having a stimuli-responsive functional group to the water-insoluble polymer is preferably 100:5 to 100:100 and more preferably 100:10 to 100:60. When the monomer component constituting the stimuli-responsive polymer comprises a monomer having a stimuli-responsive functional group and another copolymerizable monomer having no stimuli-responsive functional group, the content of the water-insoluble polymer is such that the volume ratio of ~~the water-insoluble polymer to the~~ monomer having a stimuli-responsive functional group to the water-insoluble polymer is preferably 100:5 to 100:100 and more preferably 100:10 to 100:60. When the stimuli-responsive polymer is used as a mixture with another polymer, the content of the water-insoluble polymer is set depending on which case of the above cases the monomer component constituting the stimuli-responsive polymer corresponds to.